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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,870

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Satoru Nishiuma

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EXAMINER

WEISZ, DAVID G

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

01/22/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,870	Applicant(s) NISHIUMA, SATORU	
	Examiner DAVID WEISZ	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/5/09 and 12/28/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgement is made of amendment filed 11/3/09. Claims 1 and 7 are amended and claim 4 is canceled. Claims 1-3 and 5-9 are pending and presented for examination.

Response to Amendment

2. In response to the applicant's amendments the examiner modifies the grounds.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-3 and 5-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielzik et al. (US 5822472, IDS) (Danielzik) in view of Pilevar et al. (US 6558958, IDS) (Pilevar).

Danielzik discloses an optical analysis device comprising an external face capable of immobilizing a detection-objective substance (col3/126-50) (*claim 7*), a first end and a second end (figure 1), a light separating means at an end for separating exciting light from fluorescent light, wherein exciting light is entered from another end and fluorescent light is generated from detection-objective substance, and a detecting

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means (col3/l26-50) (*claim 1*). The reference additionally discloses a light separating means that is a coupling grating (col3/l26-50) (*claim 2*). The reference additionally discloses the light-transmitting member to comprise an optical waveguide (col3/l26-50) (*claim 3*). The reference additionally discloses a coupling means that is a diffraction grating at a first end of the device (Col3/l26-50) (*claims 5 and 6*). The reference additionally discloses that the trapping component traps via antigen-antibody reaction (col11/l24-42) (*claim 8*) or a hybridization reaction of DNA (col10/l35-40) (*claim 9*). However, the reference does not specifically disclose the light transmitting member to be cylindrical, that fluorescing light is condensed before detection, or a flow path, as disclosed in claim 1.

Pilevar discloses a columnar cylindrical light transmitting member capable of immobilizing a detection-objective substance (Abstract, Figure 2). The reference further discloses a flow cell (in other words, a flow path) covering the light-transmitting member having an inlet and an outlet (Figure 2). The reference discloses that waveguides, such as those disclosed in Danielzik and Pilevar are used as light transmitting members and can have a variety of configurations, including a cylindrical columnar configuration as disclosed in Pilevar (Col1/L15-Col3/L45). The reference further discloses that a coupler is used to maximize fluorescence collection (Col7/L28-38). One having ordinary skill in the art would use such a coupler to condense fluorescent light in order to maximize fluorescent light collection for accurate analysis. The reference further discloses that waveguides can be inserted into a flow cell for analyzation in a protected environment (Figure 2, Col5/L54-67). It would have been obvious to one having ordinary skill in the art to put the optical analysis device of Danielzik into a flow cell as it would provide a protected environment, and would also provide a controlled environment for a medium contacting the light transmitting member, as described by Pilevar (Col5/L54-67) (*claim 1*).

Response to Arguments

6. Applicant's arguments with respect to claims 1-3 and 5-9 have been considered but are moot in view of the new ground(s) of rejection. However, the examiner will address pertinent arguments of Applicant's remarks filed 11/3/09. On page 7, the

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applicant argues that Pilevar is silent regarding an optical analysis device comprising a flow cell. Please see Figure 2 and Column 5, lines 54-67 of the Pilevar reference, wherein an optical analysis device is used with a flow cell. The applicant further argues that there is no motivation to combine the flow cell of Pilevar with the device in Danielzik. Please refer to Item 5 above. For these reasons, claims 1-3 and 5-9 remain rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID WEISZ whose telephone number is (571)270-7073. The examiner can normally be reached on Monday - Thursday, 7:30 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571)272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yelena G. Gakh/
Primary Examiner, Art Unit 1797

/D. W./

Examiner, Art Unit 1797